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TITLE : SILICA COATING LIQUID FOR FORMING LOW DIELECTRIC CONSTANT AND SILICA COAT SUBSTRATE WITH LOW DIELECTRIC CONSTANT

ABSTRACT : PROBLEM TO BE SOLVED: To provide a silica coating liquid for forming low-dielectric constant with a dielectric constant as small as ≤ 2.5 , having low moisture absorbability and high mechanical strength.

SOLUTION: This coating liquid contains (A) at least one silicon compound selected from the group consisting of alkoxysilanes of the general formula (I): $X_nSi(OR)^{4-n}$ and silane halides of the general formula (II): $X_nSiX'^{4-n}$ and (B) an organic template material of the general formula (III): $[R_1R_2R_3R_4N]^+Y^-$ (in these formulas, X is H, F, a 1-8C alkyl, fluorine-substituted alkyl, aryl or vinyl; R is H, a 1-8C alkyl, aryl or vinyl; X' is a halogen atom; n is an integer of 0-3; R1 is a 1-20C hydrocarbon group; R2 to R4 are each H or a 1-20C hydrocarbon group and may be the same as R1; and Y is a halogen atom or OH).

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